Nevada Goldfields Inc.
Barite Hill Project

POB 1530
McCormick, SC 29835
USA Telephone: 864-443-2222
USA Fax: 864-443-2187

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 21, 1998

SCDHEC
Bureau of Water
Water Enforcement Division
2600 Bull Street
Columbia, SC. 29201
Attn: Robin Foy

Re: Barite Hill Project
Consent Order #98-049-W - Requirement 4

Dear Mr. Foy,

Enclosed are two copies of the Barite Hill Project Ground Water Compliance Plan required by Consent Order #98-049-W for your review.

If you have any questions, please contact me at (864) 443-2222.

Sincerely,

Scott A Wilkinson
Project Manager

CC: Mike Kolin; Chief Operating Officer

Frank Filas; Corporate Environmental Manager

Enclosures

cc: Craig Kennedy, L+WM

File: scdhecrf091898

Crawford

Nevada Goldfields Inc.
Barite Hill Project

POB 1530
McCormick, SC 29835
USA Telephone: 864-443-2222
USA Fax: 864-443-2187

May 28, 1999

SCDHEC
Bureau of Water Pollution Control
2600 Bull Street
Columbia, SC 29201
Attn: Bruce Crawford

RE: Barite Hill Project – Ground water results/ first quarter 1999
Permit # 16,225 Condition 3

Dear Bruce,

Enclosed are the results of the ground water samples for the fourth quarter 1998. The following observations were made:

GW1 – Calcium was 15.5 mg/L vs. a calculated tolerance limit of 13.16 mg/L. Cadmium was 0.071 mg/L vs. a calculated tolerance limit o 0.047 mg/L. Sodium was 43 mg/L vs. a calculated tolerance limit of 11.6 mg/L. Mercury was .004 mg/L vs. a calculated tolerance limit of 0.001 mg/L. Zinc was 2.08 mg/L vs. a calculated tolerance limit of 1.83 mg/L. Sulfate was 304 mg/L vs. a calculated tolerance limit of 239.3 mg/L. Ammonia was 2.94 mg/L vs. a calculated tolerance limit of 0.556 mg/L. The well was dry after removal of one well casing volume. The samples were collected after the well was allowed to recharge.

GW2 – Copper was 1.84 mg/L vs. a calculated tolerance limit of 1.308 mg/L. Mercury was 0.003 mg/L vs. a calculated tolerance limit of 0.0001 mg/L. Alkalinity was 67.2 mg/L vs. a calculated tolerance limit of 19.293 mg/L. Sulfate was 546 mg/L vs. a calculated tolerance limit of 212 mg/L. Ammonia was 1.50 mg/L vs. a calculated tolerance limit of 0.328 mg/L. The well was dry after removal of one well casing volume. The samples were collected after the well was allowed to recharge.

GW3 – Calcium was 31.1 mg/L vs. a calculated tolerance limit of 26 mg/L. Sulfate was 163 mg/L vs. a calculated tolerance limit of 39.7 mg/L. Ammonia was 1.97 mg/L vs. a calculated tolerance limit of 0.695 mg/L. The well was dry after one well casing volume was removed. The samples were collected once the well recharged.

GWH – Ammonia was 0.874 vs. a calculated tolerance limit of 0.321 mg/L. Sulfate was 29.2 mg/L vs. a calculated tolerance limit of 22.73 mg/L. The well was dry after three well casing volumes were removed. The samples were collected once the well recharged.

GWI – Sodium was 8.84 mg/L vs. a calculated tolerance limit 7.56 mg/L. Ammonia was 0.396 mg/L vs. a calculated tolerance limit of 0.186 mg/L. Sulfate was 17.5 mg/L vs. a calculated tolerance limit of 13.834 mg/L.

GWJ – Ammonia was 1.05 mg/ L vs. a calculated tolerance limit of 0.428 mg/L. The well was dry before three well casing volumes were removed. The samples were collected after the well recharged.

GWK – All the constituents were within the calculated tolerance limits. The well was dry after two well casing volumes were removed. The samples were collected once the well recharged.

GWP – Ammonia was 0.963 mg/L vs. a calculated tolerance limit of 0.326 mg/L.

If you have any questions, please contact me at 864 443-2222.

Sincerely,

Scott A. Wilkinson
Project Manager

Cc: Frank Filas; Corporate Environmental Manager

file:scdhebc052899

GW Wells Monitoring Report
First Quarter 1999

NEVADA GOLDFIELDS
McCormick, SC

SIGNATURE PAGE

This report, "Groundwater Sampling and Analytical Procedures Report for First Quarter, 1999," has been prepared in accordance with accepted quality control practices at the request of and for the exclusive use of **NEVADA GOLDFIELDS** The report has been reviewed by the undersigned reviewers.

SHEALY ENVIRONMENTAL SERVICES, INC.

Michael A. Woodrum, Vice President of Analytical Services
March 31, 1999

Andy Norris, Quality Assurance/Quality Control Officer
March 31, 1999

TABLE OF CONTENTS

GROUNDWATER SAMPLING AND ANALYTICAL PROCEDURES REPORT

First Quarter 1999

NEVADA GOLDFIELDS, INC.
McCormick, SC

I. INTRODUCTION

This report describes the procedures followed by **SHEALY ENVIRONMENTAL SERVICES, INC. (SHEALY)** during the sampling and analysis of groundwater at **NEVADA GOLDFIELDS,** McCormick, SC. The report includes procedures for:

1. Sample collection
2. Sample preservation
3. Chain-of-Custody control
4. Analytical protocol

These procedures were developed by **SHEALY** to comply with the sampling procedures recommended by SCDHEC, the US Environmental Protection Agency (EPA), the Resource Conservation and Recovery Act (RCRA), Groundwater Monitoring Technical Enforcement Guidance Document (TEGD) (1986), and published research findings. The protocol described was designed to insure that the integrity of the samples were maintained in the field, during transit to the laboratory and throughout the analytical procedures.

I.A. MONITORING PARAMETERS AND FREQUENCY

The following wells were sampled during March, 1999:

GW-1	GW-2	GW-3	Well K	Well J
Well H	Well P	Well I		

These monitoring wells were analyzed for the following parameters:

*TDS	* Nitrate+Nitrite-N	*Sulfate	*Chloride
*TOC	* Alkalinity Bicarbonate	*Ammonia	* Cyanide

*Metals: As,Hg,Se,Pb,Al,Ba,Cd,Ca,Cr,Cu,Fe,Mg,Mn,Ni,K,Ag,Na,Zn
Dissolved Cu

I.B. SAMPLING PROTOCOL

The procedures described below are intended to insure that representative groundwater samples are collected. Procedures for measurement of the water table depth, measurement of total well depth, well evacuation, and sample collection are included.

For each well, all data collected were recorded on a Field Data Information Sheet. Prior to the initiation of activities at each well, all sampling personnel put on new, laboratory quality PVC gloves. These gloves were replaced as necessary during the well evacuation and sampling procedure. Prior to the collection of any groundwater quality data at each well, the surface integrity of the well was checked. Any problems which could affect groundwater sample integrity were noted on the Field Data Information Sheet.

I.B.1. Water Level Measurement

Prior to the evacuation of each monitoring well, the depth to the water table was determined with the use of an electronic water level indicator. The water level indicator uses a sensitive circuitry to activate a buzzer when electrical continuity is made at the probe. The sensitivity is set so that waters with conductivities greater than approximately one umhos/cm will close the circuit. After use at each well, the instrument was cleaned according to the "Field Cleaning Procedures," which are described in Section I.C.1. The depth to the water table was measured by turning the instrument on and then slowly lowering the instrument probe into the well until the buzzer sounded. The distance from the measuring point of the well to the water level was then measured and recorded. The instrument was calibrated in 0.05 foot increments. All measurements were made and estimated to the nearest 0.01 foot.

I.B.2. Total Depth Measurement

The total depth measurement is used in calculating the volume of water standing in the well casing. The total well depth was taken from historical data.

I.B.3. Well Evacuation

The purpose of the well evacuation procedure is to initiate the introduction of water from the surrounding aquifer into which the well is placed. By removing standing water from the well, a hydraulic gradient is created which results in water from the surrounding aquifer into the well. The quality of this water is representative of the water quality immediately surrounding the well.

Well evacuation and sampling of all wells at the site were done using 1.66 inch outside diameter, three foot long Teflon or stainless steel bailers with a single bottom check valve. All bailers were cleaned at the laboratory prior to use, and a separate bailer was used for each well. When field cleaning was required, the method outlined in Section I.C.1. was used and new 1/8 inch nylon twine was used for each well.

The following steps were followed for evacuation with Teflon bailers:

1. The depth to the water table was subtracted from the total well depth to determine the length of the water column. The water column length was multiplied by the appropriate conversion factor for that particular well casing diameter to determine the volume, in gallons, of water standing in the well casing. This volume was then multiplied by three to calculate the standard evacuation volume.
2. The bailer was lowered to a depth just below the water level in the well each time to insure adequate evacuation of the standing water.
3. The pH and Specific Conductivity were measured and recorded periodically during well evacuation. For high yield wells, well evacuation continued until the standard evacuation volume was removed and both pH and Specific Conductivity were relatively stable. Stability of the pH is defined as two consecutive measurements varying by no more than 10 percent. All evacuated volumes and field measurements were recorded on the Field Data Information Sheet.

Wells which were evacuated to dryness prior to reaching the standard evacuation volume were sampled as soon as a sufficient volume of water had entered the well. Field parameters were measured prior to sample collection to insure water quality stability.

I.B.4. <u>Sample Collection</u>

The primary consideration during the collection of groundwater samples is to insure that the sample is not altered or contaminated during withdrawal from the well and introduction into the sample container.

A complete set of pre-cleaned and pre-labeled sample containers were removed from the cooler and slowly filled with fresh sample, poured directly from the bailer. Preservatives were added to the sample bottles prior to leaving for the sampling event. Care was taken to insure that the bailer did not contact the sample bottle during filling. The filled bottles were then capped and securely placed into the pre-cleaned cooler. The Chain of Custody Form, was then completed for that well. Finally, the well was re-capped and locked.

I.C. FIELD QUALITY CONTROL

A strict quality control program is followed in the field by **SHEALY** to insure that sample integrity is maintained during sample collection and transit to the laboratory. In addition, all equipment and instruments are carefully maintained and calibrated in accordance with schedules and procedures described in SHEALY's Quality Control Manual entitled "SOP and QA Manual for Groundwater Sampling".

I.C.1. Field Cleaning Procedures

All field equipment and instrumentation are cleaned at the laboratory according to standard laboratory procedures upon return from each sampling trip. Field equipment and instrumentation include: sample coolers, pH and Specific Conductivity meters, and field measurement vessels. If instrumentation and field equipment were used on more than one well, it was cleaned according to the following field cleaning procedures:

1. Rinse item thoroughly with a 5% phosphate-free laboratory detergent solution.
2. Rinse item with deionized water, twice.

I.C.2. Field Instruments and Measuring Devices

Instruments and devices used to collect field data at the **NEVADA GOLDFIELDS** facility include: pH and Specific Conductivity meters and an electronic water level indicator.

The pH and Specific Conductivity meters were calibrated in the field prior to sampling. The pH meter was calibrated using a 4 SU standard and a 10 SU standard. The Specific Conductivity meter was also calibrated in the field according to SHEALY's Field Operation SOP and the manufacturer's specifications. All calibration records for both meters are recorded in the appropriate calibration log books maintained at Shealy.

I.C.3. Field Blanks

One set of field blanks was collected during the sampling event. At that time, one set of bottles was randomly removed from the sample cooler and labeled as "Field Blank". The Field Blank was obtained by filling a laboratory cleaned bailer with deionized water. this water was then poured into the labeled sample bottles. The deionized water is also used to rinse field equipment. Once filled, the field blanks were treated as samples and placed in the sample cooler for transport to the laboratory. Field blanks and groundwater samples were analyzed for the same parameters in order to assure quality control during sampling, transportation, and analysis.

I.C.4. Field Data Information Sheet

All pertinent field information was recorded on the Field Data Information Sheet as it was collected. This information includes: date of sampling, name of collector, monitoring well number, casing diameter and material of construction, well integrity, measuring point elevation, total well depth, depth to groundwater, volume of water in casing, method of evacuation and sampling, total volume of water evacuated, field measurements with time and volume evacuated, and field observations. Information on the Field Data Information Sheets was reviewed upon arrival at the laboratory and pertinent information transferred to the Certificate of analysis and noted as field measurements.

I.C.5. Sample Transportation and Chain of Custody

The transportation of groundwater samples from the time of collection to their arrival at the laboratory is an important part of the groundwater monitoring program. The mode of travel must be such that the sample is not altered physically, chemically, or biologically. The travel time to the laboratory must not interfere with the sample holding time. The Chain of Custody must also be maintained during the transportation process. Samples collected at the **NEVADA GOLDFIELDS** facility remained in the possession of **SHEALY** personnel and were transported to the laboratory within the allowed holding time of all the required parameters. Custody is defined as:

1. Being in one's physical possession.
2. Being in one's view, after being in one's possession.
3. Being in a designated secure area.

Upon arrival at the laboratory, the sampling personnel relinquished the samples to the laboratory sample custodian. This transaction was documented on the Chain of Custody Form.

Reviewed By:_____ _____

Milton P. Quattlebaum — Date

Field Service Supervisor

II. ANALYTICAL PROTOCOL

The analytical protocols used at SHEALY to insure that groundwater quality at the **NEVADA GOLDFIELDS** facility was accurately detected and quantified were taken two EPA sources, Methods for Chemical Analyses of Water and Wastes and Test Methods for Evaluation Solid Waste. The analysis for metals was for the total recoverable fraction. Laboratory Quality Control/Quality Assurance procedures are presented in detail in the SHEALY's SOP Manuals.

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111
www.shealyenvironmental.com

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161192
Description: GW-1

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/28/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		36.95	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		24.18	ft.		03/16/99	MPQ
pH-Field at 16.0 C	150.1	3.97	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	348	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	16.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	2.94	mg/l		03/18/99 0930	EMD
Chloride	300.0	6.76	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/24/99 0800	03/25/99 1300	JPS
Nitrate + Nitrite	353.2	0.639	mg/l		03/18/99 1110	NWD
Sulfate	375.4	304	mg/l		03/23/99 1100	JPS
TOC	415.1	2.6	mg/l		03/19/99 1949	JPS
TDS	160.1	320	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	5.41	mg/l	03/18/99 0830	03/24/99 1107	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Barium	6010B	0.049	mg/l	03/18/99 0830	03/24/99 1107	FTS
Cadmium	6010B	0.071	mg/l	03/18/99 0830	03/24/99 1107	FTS
Calcium	6010B	15.5	mg/l	03/18/99 0830	03/24/99 1107	FTS
[illegible]ium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	2.14	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	6.77	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	7.39	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	1.81	mg/l	03/18/99 0830	03/24/99 1107	FTS
	6010B	0.047	mg/l	03/18/99 0830	03/24/99 1107	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.824	mg/l	03/18/99 0830	03/24/99 1107	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Sodium	6010B	43.1	mg/l	03/18/99 0830	03/24/99 1517	FTS
Zinc	6010B	2.08	mg/l	03/18/99 0830	03/24/99 1107	FTS
Mercury	7470A	0.004	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	1.96	mg/l	03/18/99 0830	03/24/99 1102	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161193
Description: GW-2

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		28.20	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		21.61	ft.		03/16/99	MPQ
pH-Field at 14.0 C	150.1	2.46	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	553	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	14.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	67.2	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.50	mg/l		03/18/99 0930	EMD
Chloride	300.0	3.49	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.04	mg/l		03/18/99 1110	NWD
Sulfate	375.4	546	mg/l		03/23/99 1100	JPS
TOC	415.1	1.2	mg/l		03/19/99 2008	JPS
TDS	160.1	396	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	13.4	mg/l	03/18/99 0830	03/24/99 1117	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Barium	6010B	0.021	mg/l	03/18/99 0830	03/24/99 1117	FTS
Cadmium	6010B	0.034	mg/l	03/18/99 0830	03/24/99 1117	FTS
Calcium	6010B	10.8	mg/l	03/18/99 0830	03/24/99 1117	FTS
Chromium	6010B	0.020	mg/l	03/18/99 0830	03/24/99 1117	FTS
Copper	6010B	1.84	mg/l	03/18/99 0830	03/24/99 1117	FTS
Iron	6010B	38.8	mg/l	03/18/99 0830	03/24/99 1117	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1117	FTS
Magnesium	6010B	7.66	mg/l	03/18/99 0830	03/24/99 1117	FTS
Manganese	6010B	0.567	mg/l	03/18/99 0830	03/24/99 1117	FTS
Nickel	6010B	0.082	mg/l	03/18/99 0830	03/24/99 1117	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	1.12	mg/l	03/18/99 0830	03/24/99 1117	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Sodium	6010B	8.11	mg/l	03/18/99 0830	03/24/99 1519	FTS
Zinc	6010B	1.88	mg/l	03/18/99 0830	03/24/99 1117	FTS
Mercury	7470A	0.003	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	1.78	mg/l	03/18/99 0830	03/24/99 1112	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161194
Description: GW-3

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		22.60	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		6.90	ft.		03/16/99	MPQ
pH-Field at 13.0 C	150.1	6.41	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	200	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	13.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	70.2	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.97	mg/l		03/18/99 0930	EMD
Chloride	300.0	9.23	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	0.169	mg/l	03/29/99 0830	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.586	mg/l		03/18/99 1110	NWD
Sulfate	300.0	163	mg/l		03/19/99 1130	JPS
TOC	415.1	2.7	mg/l		03/19/99 2027	JPS
TDS	160.1	384	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	2.09	mg/l	03/24/99 0830	03/25/99 1229	FTS
Arsenic	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Barium	6010B	0.035	mg/l	03/24/99 0830	03/25/99 1229	FTS
Cadmium	6010B	<0.002	mg/l	03/24/99 0830	03/25/99 1229	FTS
Calcium	6010B	31.1	mg/l	03/24/99 0830	03/25/99 1229	FTS
Chromium	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Copper	6010B	0.074	mg/l	03/24/99 0830	03/25/99 0041	FTS
Iron	6010B	2.60	mg/l	03/24/99 0830	03/25/99 1229	FTS
Lead	6010B	<0.003	mg/l	03/24/99 0830	03/25/99 1229	FTS
Magnesium	6010B	18.2	mg/l	03/24/99 0830	03/25/99 1229	FTS
Manganese	6010B	0.892	mg/l	03/24/99 0830	03/25/99 1229	FTS
Nickel	6010B	<0.010	mg/l	03/24/99 0830	03/25/99 1229	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.384	mg/l	03/24/99 0830	03/25/99 1229	FTS
Selenium	6010B	0.029	mg/l	03/24/99 0830	03/25/99 1229	FTS
Silver	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Sodium	6010B	18.7	mg/l	03/24/99 0830	03/25/99 1522	FTS
Zinc	6010B	0.039	mg/l	03/24/99 0830	03/25/99 1229	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	0.046	mg/l	03/24/99 0830	03/25/99 0036	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161198
Description: Well H

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		53.00	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		8.98	ft.		03/16/99	MPQ
pH-Field at 19.0 C	150.1	5.37	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	88.54	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	19.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.874	mg/l		03/18/99 0930	EMD
Chloride	300.0	7.28	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	2.56	mg/l		03/18/99 1110	NWD
Sulfate	300.0	29.2	mg/l		03/19/99 1130	JPS
TOC	415.1	1.2	mg/l		03/19/99 2259	JPS
TDS	160.1	16	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1330	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Barium	6010B	0.017	mg/l	03/18/99 0830	03/24/99 1330	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1330	FTS
Calcium	6010B	1.13	mg/l	03/18/99 0830	03/24/99 1330	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Copper	6010B	0.032	mg/l	03/18/99 0830	03/24/99 1330	FTS
Iron	6010B	0.078	mg/l	03/18/99 0830	03/24/99 1330	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1330	FTS
Magnesium	6010B	0.605	mg/l	03/18/99 0830	03/24/99 1330	FTS
Manganese	6010B	0.065	mg/l	03/18/99 0830	03/24/99 1330	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1330	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1330	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Sodium	6010B	20.3	mg/l	03/18/99 0830	03/24/99 1531	FTS
Zinc	6010B	20.3	mg/l	03/18/99 0830	03/24/99 1330	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	0.019	mg/l	03/18/99 0830	03/24/99 1325	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
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www.shealyenvironmental.com

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161199
Description: Well I

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		88.30	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		52.00	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	5.20	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	81.4	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.396	mg/l		03/18/99 0930	EMD
Chloride	300.0	10.7	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	0.021	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	1.23	mg/l		03/18/99 1110	NWD
Sulfate	300.0	17.5	mg/l		03/19/99 1130	JPS
TOC	415.1	2.5	mg/l		03/19/99 2318	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.220	mg/l	03/18/99 0830	03/24/99 1340	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Barium	6010B	0.030	mg/l	03/18/99 0830	03/24/99 1340	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1340	FTS
Calcium	6010B	1.81	mg/l	03/18/99 0830	03/24/99 1340	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Copper	6010B	0.010	mg/l	03/18/99 0830	03/24/99 1340	FTS
Iron	6010B	0.338	mg/l	03/18/99 0830	03/24/99 1340	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1340	FTS
Magnesium	6010B	2.17	mg/l	03/18/99 0830	03/24/99 1340	FTS
Manganese	6010B	0.050	mg/l	03/18/99 0830	03/24/99 1340	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1340	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.290	mg/l	03/18/99 0830	03/24/99 1340	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Sodium	6010B	8.84	mg/l	03/18/99 0830	03/24/99 1540	FTS
Zinc	6010B	0.027	mg/l	03/18/99 0830	03/24/99 1340	FTS
Mercury	7470A	0.0003	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	0.006	mg/l	03/18/99 0830	03/24/99 1335	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161197
Description: Well J

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		63.90	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		59.55	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	5.64	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	54.3	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.05	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.97	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.416	mg/l		03/18/99 1110	NWD
Sulfate	300.0	16.9	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2240	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.180	mg/l	03/18/99 0830	03/24/99 1254	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Barium	6010B	0.009	mg/l	03/18/99 0830	03/24/99 1254	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1254	FTS
Calcium	6010B	1.58	mg/l	03/18/99 0830	03/24/99 1254	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Copper	6010B	0.013	mg/l	03/18/99 0830	03/24/99 1254	FTS
Iron	6010B	1.23	mg/l	03/18/99 0830	03/24/99 1254	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1254	FTS
Magnesium	6010B	3.31	mg/l	03/18/99 0830	03/24/99 1254	FTS
Manganese	6010B	0.025	mg/l	03/18/99 0830	03/24/99 1254	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1254	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1254	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Sodium	6010B	4.70	mg/l	03/18/99 0830	03/24/99 1529	FTS
Zinc	6010B	0.016	mg/l	03/18/99 0830	03/24/99 1254	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1249	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161195
Description: Well K

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		81.53	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		61.45	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	6.72	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	81.4	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	36.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.586	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.97	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.102	mg/l		03/18/99 1110	NWD
Sulfate	300.0	4.76	mg/l		03/19/99 1130	JPS
TOC	415.1	1.1	mg/l		03/19/99 2046	JPS
TDS	160.1	24	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	2.03	mg/l	03/18/99 0830	03/24/99 1234	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Barium	6010B	0.011	mg/l	03/18/99 0830	03/24/99 1234	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1234	FTS
Calcium	6010B	6.32	mg/l	03/18/99 0830	03/24/99 1234	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Copper	6010B	0.011	mg/l	03/18/99 0830	03/24/99 1234	FTS
Iron	6010B	3.97	mg/l	03/18/99 0830	03/24/99 1234	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1234	FTS
Magnesium	6010B	5.32	mg/l	03/18/99 0830	03/24/99 1234	FTS
Manganese	6010B	0.086	mg/l	03/18/99 0830	03/24/99 1234	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1234	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.225	mg/l	03/18/99 0830	03/24/99 1234	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Sodium	6010B	5.52	mg/l	03/18/99 0830	03/24/99 1525	FTS
Zinc	6010B	0.051	mg/l	03/18/99 0830	03/24/99 1234	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1229	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161196
Description: Well P

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		89.18	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		75.42	ft.		03/16/99	MPQ
pH-Field at 18.0 C	150.1	6.61	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	104	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	18.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	61.5	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.963	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.75	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.046	mg/l		03/18/99 1110	NWD
Sulfate	300.0	5.52	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2105	JPS
TDS	160.1	80	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.111	mg/l	03/18/99 0830	03/24/99 1244	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Barium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1244	FTS
Calcium	6010B	5.59	mg/l	03/18/99 0830	03/24/99 1244	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Copper	6010B	0.010	mg/l	03/18/99 0830	03/24/99 1244	FTS
Iron	6010B	0.199	mg/l	03/18/99 0830	03/24/99 1244	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1244	FTS
Magnesium	6010B	7.78	mg/l	03/18/99 0830	03/24/99 1244	FTS
Manganese	6010B	0.014	mg/l	03/18/99 0830	03/24/99 1244	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1244	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.200	mg/l	03/18/99 0830	03/24/99 1244	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Sodium	6010B	7.96	mg/l	03/18/99 0830	03/24/99 1527	FTS
Zinc	6010B	0.027	mg/l	03/18/99 0830	03/24/99 1244	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1239	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

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CAYCE, SOUTH CAROLINA 29033

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161200
Description: Field Blank

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.955	mg/l		03/23/99 0900	MCM
Chloride	300.0	<1.00	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	<0.020	mg/l		03/17/99 1555	NWD
Sulfate	300.0	<1.00	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2336	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Barium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1350	FTS
Calcium	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Iron	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1350	FTS
Magnesium	6010B	<0.030	mg/l	03/18/99 0830	03/24/99 1350	FTS
Manganese	6010B	<0.015	mg/l	03/18/99 0830	03/24/99 1350	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1350	FTS
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1350	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS

(Continuation of 161200)

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Sodium	6010B	<0.100	mg/l	03/18/99 0830	03/24/99 1545	FTS
Zinc	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1345	FTS

DEPTH TO GROUNDWATER SUMMARY

NEVADA GOLDFIELDS
McCormick, SC

WELL NUMBER	DGW (feet)
GW-1	24.18
GW-2	21.61
GW-3	6.90
Well K	61.45
Well H	53.00
Well P	75.42
Well I	52.00
Well J	59.55

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Page ____ of ____

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

CHAIN OF CUSTODY #

Client Name: Nevada Goldfields

Reporting Address: McCormick, SC

Attention: Scott Wilkerson

Telephone No. _____ P.O. No. _____

NPDES # _____

County _____

Receiving Stream _____

Outfall No. _____

Sample ID (Location)	Yr. 1999 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	Nutrients - Specify	METALS - Specify	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	Cyanide	Coliform - Specify type	Toxicity - Specify	General / Dissolved Gas	
GW-1	Start 16 Mar / Finish		X				5			X	X	X									X			X	X
GW-2	Start / Finish		X				5			X	X	X									X			X	X
GW-3	Start / Finish		X				5			X	X	X									X			X	X
Well K	Start / Finish		X				5			X	X	X									X			X	X
Well P	Start / Finish		X				5			X	X	X									X			X	X
Well J	Start / Finish		X				5			X	X	X									X			X	X
Well H	Start / Finish		X				5			X	X	X									X			X	X
Well I	Start 16 Mar 1999 / Finish		X				5			X	X	X									X			X	X

←PRESERVATION (CODE)

CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F = _____

REMARKS

General - TDS, Cl, Nitrate/Nitrite, Alk, sulfate
Nuts - NH_3, TOC
Metals - As, Hg, Se, Pb, Al, Ba, Cd, Ca, Cr, Cu, Fe, Mg, Mn
Ni, K, Ag, Na, Zn

LAB USE ONLY

Program Area (Circle): DW, CWA/NPDES, RCRA, SP/SOL, SP/LIQ, Other:_____

SESI LAB I.D.

GW-1: 161192
GW-2: 161193
GW-3: 161194
Well K: 161195
Well P: 161196
Well J: 161197
Well H: 161198
Well I: 161199

SAMPLER
Print Name: MILTON QUATTLEBAUM
Signature:

Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time
	17Mar99 0915		
Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time
Relinquished by (Sig.)	Date/Time	Lab Receipt by (Sig.)	Date/Time
		WBridges	3/17/99 0915

Hazards Associated with Sample

Custody Seal Intact (Circle): YES NO NONE

Receipt TRC _____ mg/l

Receipt pH _____ su

Receipt Temp. 3.4 °C

Received on Ice (Circle): YES NO ICE PACK

AMERICAN SYSTEMS, COLUMBIA, S.C.

White Copy: Sampler — Yellow Copy: Shealy — Pink Copy: Report

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Page ____ of ____

CHAIN OF CUSTODY #

NPDES # ____

County ____

Receiving Stream ____

Outfall No. ____

Client Name: Nevada Goldfields

Reporting Address: McCormick, SC

Attention: Scott Wilkerson

Telephone No. ____ P.O. No. ____

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

PRESERVATION (CODE)
CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F = ____

LAB USE ONLY (initials, 3/17/99)
Program Area (Circle): DW, CWA/NPDES (circled, struck through), RCRA (struck through), SP/SOL (struck through), SP/LIQ (circled), Other: ____

Sample ID (Location)	Yr. 1999 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	Nutrients - Specify	METALS - Specify	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	Cyanide	Coliform - Specify type	Toxicity - Specify	General	Dissolved Cu	REMARKS	SESI LAB I.D.
Field Blank	Start: 16Mar; Finish:									X	X	X									X			X	X	General - TDS, Cl, Nitrate/Nitrite, Alk, Sulfate	161200
	Start: ; Finish:																									Nuts - NH_3, TOC	
	Start: ; Finish:																									Metals - As, Hg, Se, Pb, Al, Ba, Cd, Ca, Cr, Cu,	
	Start: ; Finish:																									Fe, Mg, Mn, Ni, K, Ag, Na, Zn	
	Start: ; Finish:																										
	Start: ; Finish:																										
	Start: ; Finish:																										
	Start: ; Finish:																										

	Date/Time	Received by (Sig.)	Date/Time	Hazards Associated with Sample
SAMPLER Print Name: Milton Quattlebaum; Signature: (signature)	17Mar99 0915			
Relinquished by (Sig.)		Received by (Sig.)		
Relinquished by (Sig.)		Lab Receipt by (Sig.) W. Bridges	3/17/99 0915	

Custody Seal Intact (Circle): YES NO NONE
Receipt TRC ____ mg/l
Receipt pH ____ su
Receipt Temp. 3.4 °C
Received on Ice (Circle): YES (circled) NO ICE PACK

AMERICAN SYSTEMS, COLUMBIA, S.C.

White Copy: Sampler Yellow Copy: Shealy Pink Copy: Report

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

16/172

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID # GW 1		Well Yield: Low - Mod. - High	
Weather Conditions Clear Cold	Air Temperature °C.	Remarks:	
Total Well Depth (TWD) = ~~24.18~~ 36.95			
Depth To Groundwater (DGW) = 24.18			
Length Of Water Column (LWC) = 12.77			
1 Casing Volume (OCV) = LWC x .652 = 8.33	gal.		
3 Casing Volumes = 24.99	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation (TB) SSB WW GP Other_____			
Method of Sample Collection (TB) SSB WW GP Other_____			

Evacuation and Collection Methods	Constants for Casing Diameters	
TB - Teflon Bailer	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailer	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	8.33				WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)	9:37	9.47				Remarks:
pH (SU)	3.64	3.97				Dry at 8.33 gal.
WATER TEMPERATURE (°C.)	14°	16°				
SP. CONDUCTIVITY (UMHOS/CM)	410	420				
TURBIDITY (SUBJECTIVE)*	1	1				
ODOR (SUBJECTIVE)**	1	1				

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1611193

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID #	GW-2	Well Yield: ~~Low~~ - Mod. - High	
Weather Conditions	Clear, Cold Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	28.20		
Depth To Groundwater (DGW) =	21.61		
Length Of Water Column (LWC) =	6.59		
1 Casing Volume (OCV) = LWC x .652 =	4.30 gal.		
3 Casing Volumes =	12.9 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

AW 11699

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	1st	4.30		WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)		9:20	9:24		Remarks:
pH (SU)	900	2.53	2.46		Dry at 4.3 gal.
WATER TEMPERATURE (°C.)		14°	14°		
SP. CONDUCTIVITY (UMHOS/CM)		900	700		
TURBIDITY (SUBJECTIVE)*		1	2		
ODOR (SUBJECTIVE)**		1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

161174

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID #	GW-3	Well Yield: Low - Mod. - High	
Weather Conditions	Clear - cool Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	22.60		
Depth To Groundwater (DGW) =	6.90		
Length Of Water Column (LWC) =	15.7		
1 Casing Volume (OCV) = LWC x	.652 = 10.24 gal.		
3 Casing Volumes =	30.72 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092		5" = 1.02	
2" = 0.163		6" = 1.47	
3" = 0.367		7" = 2.00	
4" = 0.652		8" = 2.61	

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	10.24				WELL SAMPLE TIME: 11:20
TIME (24 HOUR SYSTEM)	10:37	10:45				Remarks:
pH (SU)	6.14	6.41				Dry at 10.24 gal.
WATER TEMPERATURE (°C.)	13°	13°				
SP. CONDUCTIVITY (UMHOS/CM)	230	260				
TURBIDITY (SUBJECTIVE)*	1	1				
ODOR (SUBJECTIVE)**	1	1				

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1/01/96

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID #	Well H	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Mild Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	61.98		
Depth To Groundwater (DGW) =	53.00		
Length Of Water Column (LWC) =	8.98		
1 Casing Volume (OCV) = LWC x	.163 = 1.46 gal.		
3 Casing Volumes =	4.38 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	4.38 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods	Constants for Casing Diameters	
TB - Teflon Bailer	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailer	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	1.46	2.92	4.38		WELL SAMPLE TIME: 14:20
TIME (24 HOUR SYSTEM)	14:08	14:10	14:14	14:17		Remarks:
pH (SU)	5.55	5.59	5.46	5.37		Dry at 4.38 gal.
WATER TEMPERATURE (°C.)	19°	19°	19°	19°		
SP. CONDUCTIVITY (UMHOS/CM)	110	110	110	100		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

16/1199

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: Y - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well I	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Mild Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	88.30		
Depth To Groundwater (DGW) =	52.00		
Length Of Water Column (LWC) =	36.3		
1 Casing Volume (OCV) = LWC x	.163 = 5.92 gal.		
3 Casing Volumes =	17.76 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	17.76 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	5.92	11.84	17.76		WELL SAMPLE TIME: 15:00
TIME (24 HOUR SYSTEM)	14:39	14:41	14:44	14:48		Remarks:
pH (SU)	5.26	5.20	5.22	5.20		
WATER TEMPERATURE (°C.)	21°	20°	19°	20°		
SP. CONDUCTIVITY (UMHOS/CM)	80	90	90	90		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

1101197

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well J	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Cool Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	63.90		
Depth To Groundwater (DGW) =	59.55		
Length Of Water Column (LWC) =	4.35		
1 Casing Volume (OCV) = LWC x	.163 = .71 gal.		
3 Casing Volumes =	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	2.0 gal gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	.71	1.42			WELL SAMPLE TIME: 14:00
TIME (24 HOUR SYSTEM)	1:40	1.45	1.48			Remarks:
pH (SU)	5.95	5.95	5.64			Dry at 2.0 gal
WATER TEMPERATURE (°C.)	21°	21°	20			
SP. CONDUCTIVITY (UMHOS/CM)	50	50	60			
TURBIDITY (SUBJECTIVE)*	1	1	1			
ODOR (SUBJECTIVE)**	1	1	1			

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1611175

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well K	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Cool — Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	81.53		
Depth To Groundwater (DGW) =	61.45		
Length Of Water Column (LWC) =	20.08		
1 Casing Volume (OCV) = LWC x	.163 = 3.27 gal.		
3 Casing Volumes =	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	6.54 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods	Constants for Casing Diameters	
TB - Teflon Bailer	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailer	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	3.27	6.54			WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)	12:57	1:05	1:15			Remarks:
pH (SU)	6.61	6.67	6.72			Dry at 6.54 gal.
WATER TEMPERATURE (°C.)	20°	20°	20°			
SP. CONDUCTIVITY (UMHOS/CM)	90	90	90			
TURBIDITY (SUBJECTIVE)*	1	2	2			
ODOR (SUBJECTIVE)**	1	1	1			

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1611196

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID # Well P		Well Yield: Low - Mod. - High	
Weather Conditions Clear, Cool	Air Temperature °C.	Remarks:	
Total Well Depth (TWD) = 89.18			
Depth To Groundwater (DGW) = 75.42			
Length Of Water Column (LWC) = 13.76			
1 Casing Volume (OCV) = LWC x .163 = 2.24	gal.		
3 Casing Volumes = 6.72	gal. = Standard Evacuation Volume		
Total Volume of Water Removed = 6.72	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other____		
Method of Sample Collection	(TB) SSB WW GP Other____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5"	= 0.092	5"	= 1.02
2"	= 0.163	6"	= 1.47
3"	= 0.367	7"	= 2.00
4"	= 0.652	8"	= 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	2.24	4.48	6.72		WELL SAMPLE TIME: 12:10
TIME (24 HOUR SYSTEM)	11:47	11:52	11:58	12:03		Remarks:
pH (SU)	6.29	6.45	6.52	6.61		
WATER TEMPERATURE (°C.)	19°	19°	18°	18°		
SP. CONDUCTIVITY (UMHOS/CM)	120	120	120	120		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

ANALYTICAL METHODOLOGY

NEVADA GOLDFIELDS
McCormick, SC

PARAMETER	EPA METHOD
TDS	160.1
Nitrate + Nitrite-N	353.2
Alkalinity-Bicarbonate	SM4500D
Ammonia-N	350.3
Chloride	300.0
Sulfate	375.4
TOC	415.1
Cyanide	335.2
Metals: Mercury	7470A
Total Metals (All others)	6010B

GW Wells Monitoring Report
First Quarter 1999

NEVADA GOLDFIELDS
McCormick, SC

SIGNATURE PAGE

This report, "Groundwater Sampling and Analytical Procedures Report for First Quarter, 1999," has been prepared in accordance with accepted quality control practices at the request of and for the exclusive use of **NEVADA GOLDFIELDS** The report has been reviewed by the undersigned reviewers.

SHEALY ENVIRONMENTAL SERVICES, INC.

Michael A. Woodrum, Vice President of Analytical Services
March 31, 1999

Andy Norris, Quality Assurance/Quality Control Officer
March 31, 1999

TABLE OF CONTENTS

GROUNDWATER SAMPLING AND ANALYTICAL PROCEDURES REPORT

First Quarter 1999

NEVADA GOLDFIELDS, INC.
McCormick, SC

I. INTRODUCTION

This report describes the procedures followed by **SHEALY ENVIRONMENTAL SERVICES, INC. (SHEALY)** during the sampling and analysis of groundwater at **NEVADA GOLDFIELDS**, McCormick, SC. The report includes procedures for:

1. Sample collection
2. Sample preservation
3. Chain-of-Custody control
4. Analytical protocol

These procedures were developed by **SHEALY** to comply with the sampling procedures recommended by SCDHEC, the US Environmental Protection Agency (EPA), the Resource Conservation and Recovery Act (RCRA), Groundwater Monitoring Technical Enforcement Guidance Document (TEGD) (1986), and published research findings. The protocol described was designed to insure that the integrity of the samples were maintained in the field, during transit to the laboratory and throughout the analytical procedures.

I.A. MONITORING PARAMETERS AND FREQUENCY

The following wells were sampled during March, 1999:

GW-1	GW-2	GW-3	Well K	Well J
Well H	Well P	Well I		

These monitoring wells were analyzed for the following parameters:

*TDS	* Nitrate+Nitrite-N	*Sulfate	*Chloride
*TOC	* Alkalinity Bicarbonate	*Ammonia	* Cyanide

*Metals: As,Hg,Se,Pb,Al,Ba,Cd,Ca,Cr,Cu,Fe,Mg,Mn,Ni,K,Ag,Na,Zn
Dissolved Cu

I.B. SAMPLING PROTOCOL

The procedures described below are intended to insure that representative groundwater samples are collected. Procedures for measurement of the water table depth, measurement of total well depth, well evacuation, and sample collection are included.

For each well, all data collected were recorded on a Field Data Information Sheet. Prior to the initiation of activities at each well, all sampling personnel put on new, laboratory quality PVC gloves. These gloves were replaced as necessary during the well evacuation and sampling procedure. Prior to the collection of any groundwater quality data at each well, the surface integrity of the well was checked. Any problems which could affect groundwater sample integrity were noted on the Field Data Information Sheet.

I.B.1. Water Level Measurement

Prior to the evacuation of each monitoring well, the depth to the water table was determined with the use of an electronic water level indicator. The water level indicator uses a sensitive circuitry to activate a buzzer when electrical continuity is made at the probe. The sensitivity is set so that waters with conductivities greater than approximately one umhos/cm will close the circuit. After use at each well, the instrument was cleaned according to the "Field Cleaning Procedures," which are described in Section I.C.1. The depth to the water table was measured by turning the instrument on and then slowly lowering the instrument probe into the well until the buzzer sounded. The distance from the measuring point of the well to the water level was then measured and recorded. The instrument was calibrated in 0.05 foot increments. All measurements were made and estimated to the nearest 0.01 foot.

I.B.2. Total Depth Measurement

The total depth measurement is used in calculating the volume of water standing in the well casing. The total well depth was taken from historical data.

I.B.3. Well Evacuation

The purpose of the well evacuation procedure is to initiate the introduction of water from the surrounding aquifer into which the well is placed. By removing standing water from the well, a hydraulic gradient is created which results in water from the surrounding aquifer into the well. The quality of this water is representative of the water quality immediately surrounding the well.

Well evacuation and sampling of all wells at the site were done using 1.66 inch outside diameter, three foot long Teflon or stainless steel bailers with a single bottom check valve. All bailers were cleaned at the laboratory prior to use, and a separate bailer was used for each well. When field cleaning was required, the method outlined in Section I.C.1. was used and new 1/8 inch nylon twine was used for each well.

The following steps were followed for evacuation with Teflon bailers:

1. The depth to the water table was subtracted from the total well depth to determine the length of the water column. The water column length was multiplied by the appropriate conversion factor for that particular well casing diameter to determine the volume, in gallons, of water standing in the well casing. This volume was then multiplied by three to calculate the standard evacuation volume.
2. The bailer was lowered to a depth just below the water level in the well each time to insure adequate evacuation of the standing water.
3. The pH and Specific Conductivity were measured and recorded periodically during well evacuation. For high yield wells, well evacuation continued until the standard evacuation volume was removed and both pH and Specific Conductivity were relatively stable. Stability of the pH is defined as two consecutive measurements varying by no more than 10 percent. All evacuated volumes and field measurements were recorded on the Field Data Information Sheet.

Wells which were evacuated to dryness prior to reaching the standard evacuation volume were sampled as soon as a sufficient volume of water had entered the well. Field parameters were measured prior to sample collection to insure water quality stability.

I.B.4. <u>Sample Collection</u>

The primary consideration during the collection of groundwater samples is to insure that the sample is not altered or contaminated during withdrawal from the well and introduction into the sample container.

A complete set of pre-cleaned and pre-labeled sample containers were removed from the cooler and slowly filled with fresh sample, poured directly from the bailer. Preservatives were added to the sample bottles prior to leaving for the sampling event. Care was taken to insure that the bailer did not contact the sample bottle during filling. The filled bottles were then capped and securely placed into the pre-cleaned cooler. The Chain of Custody Form, was then completed for that well. Finally, the well was re-capped and locked.

I.C. FIELD QUALITY CONTROL

A strict quality control program is followed in the field by **SHEALY** to insure that sample integrity is maintained during sample collection and transit to the laboratory. In addition, all equipment and instruments are carefully maintained and calibrated in accordance with schedules and procedures described in SHEALY's Quality Control Manual entitled "SOP and QA Manual for Groundwater Sampling".

I.C.1. Field Cleaning Procedures

All field equipment and instrumentation are cleaned at the laboratory according to standard laboratory procedures upon return from each sampling trip. Field equipment and instrumentation include: sample coolers, pH and Specific Conductivity meters, and field measurement vessels. If instrumentation and field equipment were used on more than one well, it was cleaned according to the following field cleaning procedures:

1. Rinse item thoroughly with a 5% phosphate-free laboratory detergent solution.
2. Rinse item with deionized water, twice.

I.C.2. Field Instruments and Measuring Devices

Instruments and devices used to collect field data at the **NEVADA GOLDFIELDS** facility include: pH and Specific Conductivity meters and an electronic water level indicator.

The pH and Specific Conductivity meters were calibrated in the field prior to sampling. The pH meter was calibrated using a 4 SU standard and a 10 SU standard. The Specific Conductivity meter was also calibrated in the field according to SHEALY's Field Operation SOP and the manufacturer's specifications. All calibration records for both meters are recorded in the appropriate calibration log books maintained at Shealy.

I.C.3. Field Blanks

One set of field blanks was collected during the sampling event. At that time, one set of bottles was randomly removed from the sample cooler and labeled as "Field Blank". The Field Blank was obtained by filling a laboratory cleaned bailer with deionized water. this water was then poured into the labeled sample bottles. The deionized water is also used to rinse field equipment. Once filled, the field blanks were treated as samples and placed in the sample cooler for transport to the laboratory. Field blanks and groundwater samples were analyzed for the same parameters in order to assure quality control during sampling, transportation, and analysis.

I.C.4. Field Data Information Sheet

All pertinent field information was recorded on the Field Data Information Sheet as it was collected. This information includes: date of sampling, name of collector, monitoring well number, casing diameter and material of construction, well integrity, measuring point elevation, total well depth, depth to groundwater, volume of water in casing, method of evacuation and sampling, total volume of water evacuated, field measurements with time and volume evacuated, and field observations. Information on the Field Data Information Sheets was reviewed upon arrival at the laboratory and pertinent information transferred to the Certificate of analysis and noted as field measurements.

I.C.5. Sample Transportation and Chain of Custody

The transportation of groundwater samples from the time of collection to their arrival at the laboratory is an important part of the groundwater monitoring program. The mode of travel must be such that the sample is not altered physically, chemically, or biologically. The travel time to the laboratory must not interfere with the sample holding time. The Chain of Custody must also be maintained during the transportation process. Samples collected at the **NEVADA GOLDFIELDS** facility remained in the possession of **SHEALY** personnel and were transported to the laboratory within the allowed holding time of all the required parameters. Custody is defined as:

1. Being in one's physical possession.
2. Being in one's view, after being in one's possession.
3. Being in a designated secure area.

Upon arrival at the laboratory, the sampling personnel relinquished the samples to the laboratory sample custodian. This transaction was documented on the Chain of Custody Form.

Reviewed By:_____ _____

Milton P. Quattlebaum — Date

Field Service Supervisor

II. ANALYTICAL PROTOCOL

The analytical protocols used at SHEALY to insure that groundwater quality at the **NEVADA GOLDFIELDS** facility was accurately detected and quantified were taken two EPA sources, Methods for Chemical Analyses of Water and Wastes and Test Methods for Evaluation Solid Waste. The analysis for metals was for the total recoverable fraction. Laboratory Quality Control/Quality Assurance procedures are presented in detail in the SHEALY's SOP Manuals.

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

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www.shealyenvironmental.com

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161192
Description: GW-1

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/28/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		36.95	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		24.18	ft.		03/16/99	MPQ
pH-Field at 16.0 C	150.1	3.97	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	348	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	16.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	2.94	mg/l		03/18/99 0930	EMD
Chloride	300.0	6.76	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/24/99 0800	03/25/99 1300	JPS
Nitrate + Nitrite	353.2	0.639	mg/l		03/18/99 1110	NWD
Sulfate	375.4	304	mg/l		03/23/99 1100	JPS
TOC	415.1	2.6	mg/l		03/19/99 1949	JPS
TDS	160.1	320	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	5.41	mg/l	03/18/99 0830	03/24/99 1107	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Barium	6010B	0.049	mg/l	03/18/99 0830	03/24/99 1107	FTS
Cadmium	6010B	0.071	mg/l	03/18/99 0830	03/24/99 1107	FTS
Calcium	6010B	15.5	mg/l	03/18/99 0830	03/24/99 1107	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Copper	6010B	2.14	mg/l	03/18/99 0830	03/24/99 1107	FTS
Iron	6010B	6.77	mg/l	03/18/99 0830	03/24/99 1107	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1107	FTS
Magnesium	6010B	7.39	mg/l	03/18/99 0830	03/24/99 1107	FTS
Manganese	6010B	1.81	mg/l	03/18/99 0830	03/24/99 1107	FTS
Nickel	6010B	0.047	mg/l	03/18/99 0830	03/24/99 1107	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.824	mg/l	03/18/99 0830	03/24/99 1107	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1107	FTS
Sodium	6010B	43.1	mg/l	03/18/99 0830	03/24/99 1517	FTS
Zinc	6010B	2.08	mg/l	03/18/99 0830	03/24/99 1107	FTS
Mercury	7470A	0.004	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	1.96	mg/l	03/18/99 0830	03/24/99 1102	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161193
Description: GW-2

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		28.20	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		21.61	ft.		03/16/99	MPQ
pH-Field at 14.0 C	150.1	2.46	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	553	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	14.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	67.2	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.50	mg/l		03/18/99 0930	EMD
Chloride	300.0	3.49	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.04	mg/l		03/18/99 1110	NWD
Sulfate	375.4	546	mg/l		03/23/99 1100	JPS
TOC	415.1	1.2	mg/l		03/19/99 2008	JPS
TDS	160.1	396	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	13.4	mg/l	03/18/99 0830	03/24/99 1117	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Barium	6010B	0.021	mg/l	03/18/99 0830	03/24/99 1117	FTS
Cadmium	6010B	0.034	mg/l	03/18/99 0830	03/24/99 1117	FTS
Calcium	6010B	10.8	mg/l	03/18/99 0830	03/24/99 1117	FTS
Chromium	6010B	0.020	mg/l	03/18/99 0830	03/24/99 1117	FTS
Copper	6010B	1.84	mg/l	03/18/99 0830	03/24/99 1117	FTS
Iron	6010B	38.8	mg/l	03/18/99 0830	03/24/99 1117	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1117	FTS
Magnesium	6010B	7.66	mg/l	03/18/99 0830	03/24/99 1117	FTS
Manganese	6010B	0.567	mg/l	03/18/99 0830	03/24/99 1117	FTS
Nickel	6010B	0.082	mg/l	03/18/99 0830	03/24/99 1117	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	1.12	mg/l	03/18/99 0830	03/24/99 1117	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1117	FTS
Sodium	6010B	8.11	mg/l	03/18/99 0830	03/24/99 1519	FTS
Zinc	6010B	1.88	mg/l	03/18/99 0830	03/24/99 1117	FTS
Mercury	7470A	0.003	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	1.78	mg/l	03/18/99 0830	03/24/99 1112	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161194
Description: GW-3

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		22.60	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		6.90	ft.		03/16/99	MPQ
pH-Field at 13.0 C	150.1	6.41	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	200	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	13.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	70.2	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.97	mg/l		03/18/99 0930	EMD
Chloride	300.0	9.23	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	0.169	mg/l	03/29/99 0830	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.586	mg/l		03/18/99 1110	NWD
Sulfate	300.0	163	mg/l		03/19/99 1130	JPS
TOC	415.1	2.7	mg/l		03/19/99 2027	JPS
TDS	160.1	384	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	2.09	mg/l	03/24/99 0830	03/25/99 1229	FTS
Arsenic	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Barium	6010B	0.035	mg/l	03/24/99 0830	03/25/99 1229	FTS
Cadmium	6010B	<0.002	mg/l	03/24/99 0830	03/25/99 1229	FTS
Calcium	6010B	31.1	mg/l	03/24/99 0830	03/25/99 1229	FTS
Chromium	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Copper	6010B	0.074	mg/l	03/24/99 0830	03/25/99 0041	FTS
Iron	6010B	2.60	mg/l	03/24/99 0830	03/25/99 1229	FTS
Lead	6010B	<0.003	mg/l	03/24/99 0830	03/25/99 1229	FTS
Magnesium	6010B	18.2	mg/l	03/24/99 0830	03/25/99 1229	FTS
Manganese	6010B	0.892	mg/l	03/24/99 0830	03/25/99 1229	FTS
Nickel	6010B	<0.010	mg/l	03/24/99 0830	03/25/99 1229	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.384	mg/l	03/24/99 0830	03/25/99 1229	FTS
Selenium	6010B	0.029	mg/l	03/24/99 0830	03/25/99 1229	FTS
Silver	6010B	<0.005	mg/l	03/24/99 0830	03/25/99 1229	FTS
Sodium	6010B	18.7	mg/l	03/24/99 0830	03/25/99 1522	FTS
Zinc	6010B	0.039	mg/l	03/24/99 0830	03/25/99 1229	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	0.046	mg/l	03/24/99 0830	03/25/99 0036	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161198
Description: Well H

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		53.00	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		8.98	ft.		03/16/99	MPQ
pH-Field at 19.0 C	150.1	5.37	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	88.54	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	19.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.874	mg/l		03/18/99 0930	EMD
Chloride	300.0	7.28	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	2.56	mg/l		03/18/99 1110	NWD
Sulfate	300.0	29.2	mg/l		03/19/99 1130	JPS
TOC	415.1	1.2	mg/l		03/19/99 2259	JPS
TDS	160.1	16	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1330	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Barium	6010B	0.017	mg/l	03/18/99 0830	03/24/99 1330	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1330	FTS
Calcium	6010B	1.13	mg/l	03/18/99 0830	03/24/99 1330	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Copper	6010B	0.032	mg/l	03/18/99 0830	03/24/99 1330	FTS
Iron	6010B	0.078	mg/l	03/18/99 0830	03/24/99 1330	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1330	FTS
Magnesium	6010B	0.605	mg/l	03/18/99 0830	03/24/99 1330	FTS
Manganese	6010B	0.065	mg/l	03/18/99 0830	03/24/99 1330	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1330	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1330	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1330	FTS
Sodium	6010B	20.3	mg/l	03/18/99 0830	03/24/99 1531	FTS
Zinc	6010B	20.3	mg/l	03/18/99 0830	03/24/99 1330	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	0.019	mg/l	03/18/99 0830	03/24/99 1325	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161199
Description: Well I

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		88.30	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		52.00	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	5.20	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	81.4	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.396	mg/l		03/18/99 0930	EMD
Chloride	300.0	10.7	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	0.021	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	1.23	mg/l		03/18/99 1110	NWD
Sulfate	300.0	17.5	mg/l		03/19/99 1130	JPS
TOC	415.1	2.5	mg/l		03/19/99 2318	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.220	mg/l	03/18/99 0830	03/24/99 1340	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Barium	6010B	0.030	mg/l	03/18/99 0830	03/24/99 1340	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1340	FTS
Calcium	6010B	1.81	mg/l	03/18/99 0830	03/24/99 1340	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Copper	6010B	0.010	mg/l	03/18/99 0830	03/24/99 1340	FTS
Iron	6010B	0.338	mg/l	03/18/99 0830	03/24/99 1340	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1340	FTS
Magnesium	6010B	2.17	mg/l	03/18/99 0830	03/24/99 1340	FTS
Manganese	6010B	0.050	mg/l	03/18/99 0830	03/24/99 1340	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1340	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.290	mg/l	03/18/99 0830	03/24/99 1340	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1340	FTS
Sodium	6010B	8.84	mg/l	03/18/99 0830	03/24/99 1540	FTS
Zinc	6010B	0.027	mg/l	03/18/99 0830	03/24/99 1340	FTS
Mercury	7470A	0.0003	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	0.006	mg/l	03/18/99 0830	03/24/99 1335	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161197
Description: Well J

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		63.90	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		59.55	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	5.64	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	54.3	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	1.05	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.97	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.416	mg/l		03/18/99 1110	NWD
Sulfate	300.0	16.9	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2240	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.180	mg/l	03/18/99 0830	03/24/99 1254	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Barium	6010B	0.009	mg/l	03/18/99 0830	03/24/99 1254	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1254	FTS
Calcium	6010B	1.58	mg/l	03/18/99 0830	03/24/99 1254	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Copper	6010B	0.013	mg/l	03/18/99 0830	03/24/99 1254	FTS
Iron	6010B	1.23	mg/l	03/18/99 0830	03/24/99 1254	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1254	FTS
Magnesium	6010B	3.31	mg/l	03/18/99 0830	03/24/99 1254	FTS
Manganese	6010B	0.025	mg/l	03/18/99 0830	03/24/99 1254	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1254	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1254	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1254	FTS
Sodium	6010B	4.70	mg/l	03/18/99 0830	03/24/99 1529	FTS
Zinc	6010B	0.016	mg/l	03/18/99 0830	03/24/99 1254	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1249	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

Scientists and Consultants

106 VANTAGE POINT DRIVE
CAYCE, SOUTH CAROLINA 29033

(803) 791-9700
FAX (803) 791-9111
www.shealyenvironmental.com

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161195
Description: Well K

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		81.53	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		61.45	ft.		03/16/99	MPQ
pH-Field at 20.0 C	150.1	6.72	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	81.4	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	20.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	36.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.586	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.97	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.102	mg/l		03/18/99 1110	NWD
Sulfate	300.0	4.76	mg/l		03/19/99 1130	JPS
TOC	415.1	1.1	mg/l		03/19/99 2046	JPS
TDS	160.1	24	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	2.03	mg/l	03/18/99 0830	03/24/99 1234	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Barium	6010B	0.011	mg/l	03/18/99 0830	03/24/99 1234	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1234	FTS
Calcium	6010B	6.32	mg/l	03/18/99 0830	03/24/99 1234	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Copper	6010B	0.011	mg/l	03/18/99 0830	03/24/99 1234	FTS
Iron	6010B	3.97	mg/l	03/18/99 0830	03/24/99 1234	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1234	FTS
Magnesium	6010B	5.32	mg/l	03/18/99 0830	03/24/99 1234	FTS
Manganese	6010B	0.086	mg/l	03/18/99 0830	03/24/99 1234	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1234	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.225	mg/l	03/18/99 0830	03/24/99 1234	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1234	FTS
Sodium	6010B	5.52	mg/l	03/18/99 0830	03/24/99 1525	FTS
Zinc	6010B	0.051	mg/l	03/18/99 0830	03/24/99 1234	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1229	FTS

SHEALY ENVIRONMENTAL SERVICES, INC.

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CAYCE, SOUTH CAROLINA 29033

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www.shealyenvironmental.com

CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161196
Description: Well P

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer

V.P. Analytical

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Well Depth		89.18	ft.		03/16/99	MPQ
Water Level Depth From Top of Casing		75.42	ft.		03/16/99	MPQ
pH-Field at 18.0 C	150.1	6.61	SU		03/16/99	MPQ
Specific Conductance at 25 C - Field	120.1	104	umhos/cm		03/16/99	MPQ
Temperature-Field	170.1	18.0	C		03/16/99	MPQ
INORGANICS						
Alkalinity Bicarbonate	SM4500D	61.5	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.963	mg/l		03/18/99 0930	EMD
Chloride	300.0	4.75	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	0.046	mg/l		03/18/99 1110	NWD
Sulfate	300.0	5.52	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2105	JPS
TDS	160.1	80	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	0.111	mg/l	03/18/99 0830	03/24/99 1244	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Barium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1244	FTS
Calcium	6010B	5.59	mg/l	03/18/99 0830	03/24/99 1244	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Copper	6010B	0.010	mg/l	03/18/99 0830	03/24/99 1244	FTS
Iron	6010B	0.199	mg/l	03/18/99 0830	03/24/99 1244	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1244	FTS
Magnesium	6010B	7.78	mg/l	03/18/99 0830	03/24/99 1244	FTS
Manganese	6010B	0.014	mg/l	03/18/99 0830	03/24/99 1244	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1244	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Potassium	6010B	0.200	mg/l	03/18/99 0830	03/24/99 1244	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1244	FTS
Sodium	6010B	7.96	mg/l	03/18/99 0830	03/24/99 1527	FTS
Zinc	6010B	0.027	mg/l	03/18/99 0830	03/24/99 1244	FTS
Mercury	7470A	<0.0002	mg/l	03/19/99 0830	03/22/99 1300	DPS
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1239	FTS

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CERTIFICATE OF ANALYSIS

SC DHEC No. 32010 NC DEHNR No. 329

Client: NEVADA GOLDFIELDS
PO Box 1530
McCormick, SC 29835

Attention: Scott Wilkinson

SHEALY Lab No: 161200
Description: Field Blank

Coll. Date: 03/16/99
Coll. Time:

Date Received: 03/17/99
Date Reported: 03/31/99

QA/QC Officer _____

V.P. Analytical _____

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
INORGANICS						
Alkalinity Bicarbonate	SM4500D	<10.0	mg/l		03/24/99 1343	NWD
Ammonia-N	350.3	0.955	mg/l		03/23/99 0900	MCM
Chloride	300.0	<1.00	mg/l		03/19/99 1130	JPS
Cyanide-Total	335.2	<0.010	mg/l	03/29/99 1300	03/30/99 1300	JPS
Nitrate + Nitrite	353.2	<0.020	mg/l		03/17/99 1555	NWD
Sulfate	300.0	<1.00	mg/l		03/19/99 1130	JPS
TOC	415.1	<1.0	mg/l		03/19/99 2336	JPS
TDS	160.1	<10	mg/l		03/19/99 1600	MCM
METALS						
Aluminum	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Arsenic	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Barium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Cadmium	6010B	<0.002	mg/l	03/18/99 0830	03/24/99 1350	FTS
Calcium	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Chromium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Iron	6010B	<0.050	mg/l	03/18/99 0830	03/24/99 1350	FTS
Lead	6010B	<0.003	mg/l	03/18/99 0830	03/24/99 1350	FTS
Magnesium	6010B	<0.030	mg/l	03/18/99 0830	03/24/99 1350	FTS
Manganese	6010B	<0.015	mg/l	03/18/99 0830	03/24/99 1350	FTS
Nickel	6010B	<0.010	mg/l	03/18/99 0830	03/24/99 1350	FTS
Potassium	6010B	<0.200	mg/l	03/18/99 0830	03/24/99 1350	FTS
Selenium	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Silver	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS

Parameters	Method	Result	Units	Date Prepared	Date Analyzed	Anal.
Sodium	6010B	<0.100	mg/l	03/18/99 0830	03/24/99 1545	FTS
Zinc	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1350	FTS
Mercury	7470A	<0.0002	mg/l	03/26/99 0830	03/29/99 0700	FTC
Dissolved Copper	6010B	<0.005	mg/l	03/18/99 0830	03/24/99 1345	FTS

DEPTH TO GROUNDWATER SUMMARY

NEVADA GOLDFIELDS
McCormick, SC

WELL NUMBER	DGW (feet)
GW-1	24.18
GW-2	21.61
GW-3	6.90
Well K	61.45
Well H	53.00
Well P	75.42
Well I	52.00
Well J	59.55

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.
106 Vantage [illegible]nte Drive
Cayce, South [illegible]lina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

CHAIN OF CUSTODY # ____

Client Name Nevada Goldfields

Reporting Address McCormick, SC

Attention Scott Wilkerson

Telephone No. ____ P.O. No. ____

NPDES # ____

County ____

Receiving Stream ____

Outfall No. ____

Sample ID (Location)	Yr. 1999 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	Nutrients - Specify	METALS - Specify	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	Cyanide	Coliform - Specify type	Toxicity - Specify	General / Dissolved Cu
GW-1	Start 16 Mar / Finish		X				5			X	X	X									X			X X
GW-2	Start / Finish		X				5			X	X	X									X			X X
GW-3	Start / Finish		X				5			X	X	X									X			X X
Well K	Start / Finish		X				5			X	X	X									X			X X
Well P	Start / Finish		X				5			X	X	X									X			X X
Well J	Start / Finish		X				5			X	X	X									X			X X
Well H	Start / Finish		X				5			X	X	X									X			X X
Well I	Start 16 Mar 1999 / Finish		X				5			X	X	X									X			X X

←PRESERVATION (CODE)

CODE: A = None
B = HNO3
C = H2SO4
D = NaOH
E = ICE
F = ____

REMARKS

General - TDS, Cl, Nitrate/Nitrite Alk, sulfate
Nuts - NH_3, TOC
Metals - As, Hg, Se, Pb, Al, Ba, Cd, Ca, Cr, Cu, Fe, Mg, Mn Ni, K, Ag, Na, Zn

LAB USE ONLY

Program Area (Circle)
DW CWA/NPDES
RCRA SP/SOL
SP/LIQ Other: ____

SESI LAB I.D.

GW-1: 161192
GW-2: 161193
GW-3: 161194
Well K: 161195
Well P: 161196
Well J: 161197
Well H: 161198
Well I: 161199

SAMPLER Print Name: MILTON QUATTLEBAUM Signature:	Date/Time 17Mar99 0915	Received by (Sig.)	Date/Time
Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time
Relinquished by (Sig.)	Date/Time	Lab Receipt by (Sig.)	Date/Time 3/17/99 0915

Hazards Associated with Sample

Custody Seal Intact (Circle) YES NO NONE

Receipt TRC ____ mg/l

Receipt pH ____ su

Receipt Temp. 3.4 °C

Received on Ice (Circle) YES NO ICE PACK

AMERICAN SYSTEMS, COLUMBIA, S.C.

White Copy: Sampler Yellow Copy: Shealy Pink Copy: Report

USE BALL POINT PEN ONLY, PRESS HARD

SHEALY ENVIRONMENTAL SERVICES, INC.

106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

Page ____ of ____

CHAIN OF CUSTODY #

Client Name: Nevada Goldfields

Reporting Address: McCormick, SC

Attention: Scott Wilkerson

Telephone No. ____________ P.O. No. ________

NPDES # ____________

County ____________

Receiving Stream ____________

Outfall No. ____________ 3/17/99

CHAIN OF CUSTODY RECORD

SAMPLE ANALYSIS REQUIRED

←PRESERVATION (CODE)

CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F = ______

LAB USE ONLY

Program Area (Circle): DW, CWA/NPDES, RCRA, SP/SOL, SP/LIQ, Other: ______

Sample ID (Location)	Yr. 1999 DATE	TIME	WELL	SOLID	COMP	GRAB	# of containers	pH, Conductivity	BOD	Nutrients - Specify	METALS - Specify	TOC/TOX - Specify	BTEX	VOC - Specify Method required	Pesticides/PCBs - Specify	Herbicides	Total Phenol	Oil & Grease	BNAs	Solids - Specify	Cyanide	Coliform - Specify type	Toxicity - Specify	General	Dissolved Cn		REMARKS	SESI LAB I.D.
Field Blank	Start 16 Mar / Finish									X	X	X									X			X	X		General - TDS, Cl, Nitrate/Nitrite, Alk, Sulfate; Nuts - NH_3, TOC; Metals - As, Hg, Se, Pb, Al, Ba, Cd, Ca, Cr, Cu, Fe, Mg, Mn, Ni, K, Ag, Na, Zn	161200
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											
	Start / Finish																											

SAMPLER Print Name: Milton Quattlebaum Signature: [signature]	Date/Time 17 Mar 99 0915	Received by (Sig.)	Date/Time	Hazards Associated with Sample	Custody Seal Intact (Circle) YES NO NONE; Receipt TRC ____ mg/l; Receipt pH ____ su; Receipt Temp. 3.4 °C
Relinquished by (Sig.)	Date/Time	Received by (Sig.)	Date/Time		
Relinquished by (Sig.)	Date/Time	Lab Receipt by (Sig.) W. Bridges	Date/Time 3/17/99 0915		Received on Ice (Circle) YES NO ICE PACK

AMERICAN SYSTEMS, COLUMBIA, S.C.

White Copy: Sampler   Yellow Copy: Shealy   Pink Copy: Report

16/192

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID # GW 1		Well Yield: Low - Mod. - High	
Weather Conditions Clear Cold	Air Temperature °C.	Remarks:	
Total Well Depth (TWD) = ~~24.18~~ 36.95			
Depth To Groundwater (DGW) = 24.18			
Length Of Water Column (LWC) = 12.77			
1 Casing Volume (OCV) = LWC x .652 = 8.33	gal.		
3 Casing Volumes = 24.99	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5"	= 0.092	5"	= 1.02
2"	= 0.163	6"	= 1.47
3"	= 0.367	7"	= 2.00
4"	= 0.652	8"	= 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	8.33				WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)	9:37	9.47				Remarks:
pH (SU)	3.64	3.97				Dry at 8.33 gal.
WATER TEMPERATURE (°C.)	14°	16°				
SP. CONDUCTIVITY (UMHOS/CM)	410	420				
TURBIDITY (SUBJECTIVE)*	1	1				
ODOR (SUBJECTIVE)**	1	1				

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

161193

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: PVC - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - Metal - No	Locking Cap: Y - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - N	Integrity Satisfactory: Y - N
Well ID #	GW-2	Well Yield: ~~Low~~ - Mod. - High	
Weather Conditions	Clear, Cold Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	28.20		
Depth To Groundwater (DGW) =	21.61		
Length Of Water Column (LWC) =	6.59		
1 Casing Volume (OCV) = LWC x .652 =	4.30 gal.		
3 Casing Volumes =	12.9 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	TB SSB WW GP Other____		
Method of Sample Collection	TB SSB WW GP Other____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

AW 1/6/99

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	1st	4.30		WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)		9:20	9:24		Remarks:
pH (SU)	900	2.53	2.46		Dry at 4.3 gal.
WATER TEMPERATURE (°C.)		14°	14°		
SP. CONDUCTIVITY (UMHOS/CM)		900	700		
TURBIDITY (SUBJECTIVE)*		1	2		
ODOR (SUBJECTIVE)**		1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

16174

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 4 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID #	GW-3	Well Yield: Low - Mod. - High	
Weather Conditions	Clear - cool Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	22.60		
Depth To Groundwater (DGW) =	6.90		
Length Of Water Column (LWC) =	15.7		
1 Casing Volume (OCV) = LWC x	.652 = 10.24 gal.		
3 Casing Volumes =	30.72 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	10.24			WELL SAMPLE TIME: 11:20
TIME (24 HOUR SYSTEM)	10:37	10:45			Remarks:
pH (SU)	6.14	6.41			Dry at 10.24 gal.
WATER TEMPERATURE (°C.)	13°	13°			
SP. CONDUCTIVITY (UMHOS/CM)	230	260			
TURBIDITY (SUBJECTIVE)*	1	1			
ODOR (SUBJECTIVE)**	1	1			

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

16/196

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID #	Well H	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Mild Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	61.98		
Depth To Groundwater (DGW) =	53.00		
Length Of Water Column (LWC) =	8.98		
1 Casing Volume (OCV) = LWC x	.163 = 1.46 gal.		
3 Casing Volumes =	4.38 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	4.38 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grumfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	1.46	2.92	4.38		WELL SAMPLE TIME: 14:20
TIME (24 HOUR SYSTEM)	14:08	14:10	14:14	14:17		Remarks:
pH (SU)	5.55	5.59	5.46	5.37		Dry at 4.38 gal.
WATER TEMPERATURE (°C.)	19°	19°	19°	19°		
SP. CONDUCTIVITY (UMHOS/CM)	110	110	110	100		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

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Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

16/199

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: Y - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well I	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Mild Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	88.30		
Depth To Groundwater (DGW) =	52.00		
Length Of Water Column (LWC) =	36.3		
1 Casing Volume (OCV) = LWC x	.163 = 5.92 gal.		
3 Casing Volumes =	17.76 gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	17.76 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods	Constants for Casing Diameters	
TB - Teflon Bailer	1.5" = 0.092	5" = 1.02
SSB - Stainless Steel Bailer	2" = 0.163	6" = 1.47
WW - Well Wizard	3" = 0.367	7" = 2.00
GP - Grunfos Pump	4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	5.92	11.84	17.76		WELL SAMPLE TIME: 15:00
TIME (24 HOUR SYSTEM)	14:39	14:41	14:44	14:48		Remarks:
pH (SU)	5.26	5.20	5.22	5.20		
WATER TEMPERATURE (°C.)	21°	20°	19°	20°		
SP. CONDUCTIVITY (UMHOS/CM)	80	90	90	90		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

160197

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well J	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Cool Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	63.90		
Depth To Groundwater (DGW) =	59.55		
Length Of Water Column (LWC) =	4.35		
1 Casing Volume (OCV) = LWC x	.163 = .71 gal.		
3 Casing Volumes =	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	2.0 gal gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	.71	1.42			WELL SAMPLE TIME: 14:00
TIME (24 HOUR SYSTEM)	1:40	1.45	1.48			Remarks:
pH (SU)	5.95	5.95	5.64			Dry at 2.0 gal
WATER TEMPERATURE (°C.)	21°	21°	20			
SP. CONDUCTIVITY (UMHOS/CM)	50	50	60			
TURBIDITY (SUBJECTIVE)*	1	1	1			
ODOR (SUBJECTIVE)**	1	1	1			

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1601175

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: (Y) - N	Integrity Satisfactory: Y - N
Well ID #	Well K	Well Yield: Low - Mod. - High	
Weather Conditions	Clear, Cool — Air Temperature °C.	Remarks:	
Total Well Depth (TWD) =	81.53		
Depth To Groundwater (DGW) =	61.45		
Length Of Water Column (LWC) =	20.08		
1 Casing Volume (OCV) = LWC x	.163 = 3.27 gal.		
3 Casing Volumes =	gal. = Standard Evacuation Volume		
Total Volume of Water Removed =	6.54 gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	3.27	6.54			WELL SAMPLE TIME:
TIME (24 HOUR SYSTEM)	12:57	1:05	1:15			Remarks:
pH (SU)	6.61	6.67	6.72			Dry at 6.54 gal.
WATER TEMPERATURE (°C.)	20°	20°	20°			
SP. CONDUCTIVITY (UMHOS/CM)	90	90	90			
TURBIDITY (SUBJECTIVE)*	1	2	2			
ODOR (SUBJECTIVE)**	1	1	1			

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

1611960

Field Data Information Sheet For Groundwater Sampling

Page ____ of ____

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Cayce, S.C. 29033

Date (MM-DD-YY)	**March 16, 1999**	Casing Diameter: 2 inches	Casing Material: (PVC) - Metal
Field Personnel	**MPQ**	Guard Pipe: PVC - (Metal) - No	Locking Cap: (Y) - N
Facility Name	**NEVADA GOLDFIELDS, INC.**	Protective Abutment: Y - (N)	Integrity Satisfactory: Y - N
Well ID # Well P		Well Yield: Low - Mod. - High	
Weather Conditions Clear, Cool	Air Temperature °C.	Remarks:	
Total Well Depth (TWD) = 89.18			
Depth To Groundwater (DGW) = 75.42			
Length Of Water Column (LWC) = 13.76			
1 Casing Volume (OCV) = LWC x .163 = 2.24	gal.		
3 Casing Volumes = 6.72	gal. = Standard Evacuation Volume		
Total Volume of Water Removed = 6.72	gal.		
Method of Well Evacuation	(TB) SSB WW GP Other_____		
Method of Sample Collection	(TB) SSB WW GP Other_____		

Evacuation and Collection Methods
TB - Teflon Bailer
SSB - Stainless Steel Bailer
WW - Well Wizard
GP - Grunfos Pump

Constants for Casing Diameters

1.5" = 0.092	5" = 1.02
2" = 0.163	6" = 1.47
3" = 0.367	7" = 2.00
4" = 0.652	8" = 2.61

FIELD ANALYSES

VOLUME PURGED (GALLONS)	1st	2.24	4.48	6.72		WELL SAMPLE TIME: 12:10
TIME (24 HOUR SYSTEM)	11:47	11:52	11:58	12:03		Remarks:
pH (SU)	6.29	6.45	6.52	6.61		
WATER TEMPERATURE (°C.)	19°	19°	18°	18°		
SP. CONDUCTIVITY (UMHOS/CM)	120	120	120	120		
TURBIDITY (SUBJECTIVE)*	1	1	1	1		
ODOR (SUBJECTIVE)**	1	1	1	1		

* 1 = CLEAR 2 = SLIGHT 3 = MODERATE 4 = HIGH

** 1 = NONE 2 = FAINT 3 = MODERATE 4 = STRONG

ANALYTICAL METHODOLOGY

NEVADA GOLDFIELDS
McCormick, SC

PARAMETER	EPA METHOD
TDS	160.1
Nitrate + Nitrite-N	353.2
Alkalinity-Bicarbonate	SM4500D
Ammonia-N	350.3
Chloride	300.0
Sulfate	375.4
TOC	415.1
Cyanide	335.2
Metals: Mercury	7470A
Total Metals (All others)	6010B